REMARKS

The Applicants appreciate the Examiner's thorough examination of the subject application and the indication that claims 11-13, 16, 24-26, and 35, if rewritten in independent form, would be in a condition for allowance. Applicants further request reconsideration of the subject application based on the instant amendments and following remarks.

As an initial matter, the Office Action Summary sheet indicates that the instant response is a **non-final action**. Thus the instant fully responsive amendment, tolls the time-period for response set in the June 16, 2005 Office Action.

Claims 1, 3, 9, 10, 15 and 17 have been amended. Claims 1, 3-16, 24-27, 30, and 25 are pending and claims 17-22, 39-64, and 67 are currently withdrawn. Support for the instant amendments can be found in claims 1 and 3 as originally filed and throughout the specification. No new matter has been added by the claim amendments.

Claims 3-8, 37, and 30 stand rejected under 35 U.S.C. §112, second paragraph, as being allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Each of the rejections is traversed.

As the rejection is understood, claims 3-8 were rejected for inclusion of variable "Z" which term is not relevant to the claimed formula.

Variable Z was previously deleted from at least one Markush Group of claim 3 such that claim 3 currently provides compounds which are not substituted with a Z group. The definition of "Z" has been deleted from claim 3 by the instant amendment. Thus, claim 3 is fully compliant with the requirements of §112, second paragraph.

Claims 4-8 were rejected as carrying over the "Z" variable from claim 3. Claim 4 depends from claim 1 and was therefore improperly rejected. The amendment to claim 3 also places claims 5-8 in compliance with §112, second paragraph.

Claim 27 was rejected allegedly because the terms "stress-related disorder", "anxiety disorder" and "eating disorder" are broad limitations. The rejection is traversed.

The office action fails to establish that the scope of the indicated terms is not consistent with the intended meaning provided in the specification. Applicants respectfully point out that merely because a term has a broad scope does not render the term indefinite. See, MPEP §2173.04, which provides that "if the scope of the subject matter embraced by the claims is clear, and if applicants have not otherwise indicated that they intend the invention to be of a scope different from that defined in the claims, then the claims comply with 35 U.S.C. 112, second paragraph."

Claim 27, as presented, clearly satisfies the definiteness requirements of 35 U.S.C. §112, second paragraph.

Claim 30 was rejected under §112, second paragraph, but no grounds of rejection were set forth. Thus, this rejection cannot be substantively addressed at this time.

Thus, the claims, as currently amended, are fully compliant with the requirements of 35 U.S.C. §112, second paragraph.

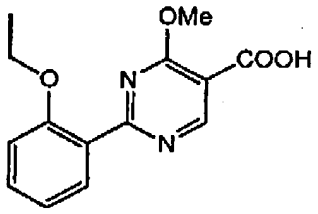
Claims 3 and 5 were rejected under 35 U.S.C. §102(b) as being allegedly anticipated by Juby (J. Med. Chem., 1979, v. 22, no. 3, pp 263-269). The rejection is traversed.

Claim 3, as amended, provides compounds in which R_2 is selected from $-OR_A$, $-S(O)_nR_A$, $-NHR_A$, $-NR_AR_B$, $-C(=O)NHR_A$, $-C(=O)NR_AR_B$, $-S(O)_nNHR_A$, $-S(O)_nNR_AR_B$, $-NHC(=O)R_A$, $-NR_BC(=O)R_A$, $-NHS(O)_nR_A$, $-NR_BS(O)_nR_A$, and 3- to 7-membered carbocyclic groups which are saturated or partially unsaturated, which may be further substituted with one or more substituents independently selected from halogen, oxo, hydroxy, amino, cyano, C_{1-4}alkyl, $-O(C_{1-4}alkyl)$, $-NH(C_{1-4}alkyl)$, $-N(C_{1-4}alkyl)(C_{1-4}alkyl)$,and $-S(O)_n$(alkyl).

Thus, claim 3, as amended, does not encompass pyrimidine compounds having a 2-aryl subsitutent and a 5-carboxylate residue (i.e., a COOH residue). Moreover, claim 3, as originally presented and as currently amended, does not encompass compounds having an N-methyl pyrimidine ring substituent or an oxo residue on the pyrimidine ring.

In contrast, Juby teaches 2-aryl-3-methyl-pyrimidin-4-one compounds (Formula A) and 2-aryl-1-methyl-pyrimidin-4-one compounds (Formula B) which have a methyl substituent attached to one of the ring nitrogen atoms. Compounds of Formula A and Formula B further possess an 4-oxo substitutent on the pyrimidine ring as an essential feature. Thus, compounds 90-93 do not satisfy claim 3 as previously presented or as currently amended.

Juby also teaches compound 96 of Formula C, which compound has the structure as follows:



Compound 96 of Juby does not satisfy claim 3, as amended, of the instant invention at least because R_2, as amended, cannot be a carboxylate residue.

Thus, claim 3, as amended, is patentable over Juby. Claim 5 depends from claim 3, and is therefore also patentable over Juby. Applicants respectfully request withdrawal of the rejection and reconsideration of the claims.

Claims 3, 5, and 7 were rejected under 35 U.S.C. §102(b) as being allegedly anticipated by Minn (WO 92/05159).

Claims 1, 3-5, 7, 9, 10, and 14 were rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Minn (WO 92/05159).

For the sake of brevity, the two § 102 and §103 rejections are addressed in combination. Such a combined response is considered appropriate because *inter alia* each of the rejections relies on Minn as the sole or primary citation. Each of the rejections is traversed.

As the reference is understood, Minn discloses 4-substituted-2-aryl pyrimidine compounds in which the 4-substituent has a C-C triple bond. That is, the 4-subsituent generically satisfies the formula: X-Y-$(CH_2)_n$C≡C-R_4 group, wherein X is selected from O, S, NH, N(alkyl), C=O, C=S, or CR_7R_8.

In contrast, claims 1 and 3, as amended, provide compounds in which R_1 and R_3 are selected from various Markush groups which exclude alkynyl or alkynyl substituted residues. That is, claims 1 and 3, as amended, exclude pyrimidine compounds in which R_1 and R_3 contain a C-C triple bond.

The X-Y-$(CH_2)_n$C≡C-R_4 group is an essential of the Minn reference. Thus, the compounds of the claimed invention, which exclude pyrimidine compounds having such substitutents, are not anticipated by or obvious in view of the Minn disclosure.

One of ordinary skill in the art would not be motivated from the Minn disclosure to make pyrimidine compounds which do not comprise the essential $X\text{-}Y\text{-}(CH_2)_nC{\equiv}C\text{-}R_4$ group disclosed therein. Thus, the instantly claimed invention would not have been obvious from Minn.

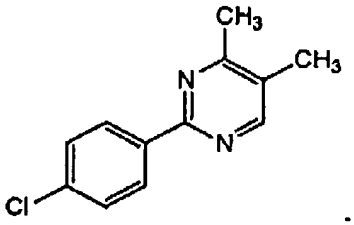
For instance, it is well-known that to establish a *prima facie* case of obviousness, three basic criteria must be met: (1) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; (2) there must be a reasonable expectation of success; and (3) the prior art reference(s) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See MPEP § 2143.

There is no suggestion or motivation, either in the reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify the cited reference to make the claimed invention, nor is there a reasonable expectation of success.

Thus, claims 1 and 3, as amended, are patentable over Minn. Claim 4 depends from claim 1 and claims 5, 7, 9, 10, and 14 depend from claim 3, and are therefore also patentable over Minn. Applicants respectfully request withdrawal of the rejections and reconsideration of the claims.

Claims 3 and 5 were rejected under 35 U.S.C. §102(b) as being allegedly anticipated by Hopworth (U.S. Patent 3,592,895). The rejection is traversed.

As the reference is understood, Hopworth recites 2-*para*-chlorophenyl-5,6-dimethylpyrimidine as a synthetic intermediate in Example 47, which compound has the formula:



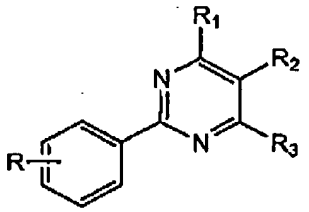
Thus, the compound recited by Hopworth has a methyl residue *para* to the chlorophenyl substituent on the pyrimidine ring, which corresponds to the R_2 position of compounds of claim 3 of the instant invention.

In contrast, claim 3, as amended, provides 2-aryl-pyrimidine compounds in which R_2 is selected from the group consisting of $-OR_A$, $-S(O)_nR_A$, $-NHR_A$, $-NR_AR_B$, $-C(=O)NHR_A$, $-C(=O)NR_AR_B$, $-S(O)_nNHR_A$, $-S(O)_nNR_AR_B$, $-NHC(=O)R_A$, $-NR_BC(=O)R_A$, $-NHS(O)_nR_A$, $-NR_BS(O)_nR_A$, and 3- to 7-membered carbocyclic groups which are saturated or partially unsaturated. Thus, claim 3, as amended, does not encompass 2-aryl-5-alkyl-pyrimidines.

Claim 3 is patentable over Hopworth. Claim 5 depends from claim 3 and is therefore also patentable over Hopworth. Applicants respectfully request withdrawal of the rejection and reconsideration of the claims.

Claims 3 5, and 6 were rejected under 35 U.S.C. §102(b) as being allegedly anticipated by Burdeska (U.S. Patent 4,493,726). The rejection is traversed.

As the reference is understood, Burdeska recites, at the broadest generic description, compounds of the formula:



wherein R_2 is hydrogen, halogen, C_1-C_6alkyl, C_1-C_6haloalkyl, and phenyl.

More particularly, compound 32 of Burdeska, which was cited by the Examiner, has methoxy residue at R_1 and R_3 and a methyl residue at R_2. Compound 42 of Burdeska has methoxyethoxy residues at R_1 and R_3 and a methyl residue at R_2.

In contrast, claim 3, as amended, provides 2-aryl-pyrimidine compounds in which R_2 is selected from the group consisting of $-OR_A$, $-S(O)_nR_A$, $-NHR_A$, $-NR_AR_B$, $-C(=O)NHR_A$, $-C(=O)NR_AR_B$, $-S(O)_nNHR_A$, $-S(O)_nNR_AR_B$, $-NHC(=O)R_A$, $-NR_BC(=O)R_A$, $-NHS(O)_nR_A$, $-NR_BS(O)_nR_A$, and 3- to 7-membered carbocyclic groups which are saturated or partially unsaturated. Thus, claim 3, as amended, does not encompass 2-aryl-5-alkyl-pyrimidines.

Claim 3 is patentable over Bardeska. Claims 5 and 6 depend from claim 3 and are therefore also patentable over Bardeska. Applicants respectfully request withdrawal of the rejection and reconsideration of the claims.

Applicants respectfully request rejoinder of Group 7 as that group was originally defined in the November 5, 2003 Office Action with revised Group I. Applicants assert that multiple groups could be searched and examined together without undue burden. For instance, Groups 1 and 7 share a common classification (514 and 544), and said groups are drawn to claims which recite pyrimidine compounds having: (1) Ar selected from phenyl or naphthyl; (2) R_2 is selected from various groups including mono and disubstitued amino groups and alkoxy groups which do not comprise a heteroaryl or heterocyclic groups; and (3) R_3 is various groups in Group 1

including alkoxy. As such, the compounds in Groups 1 and 7 possess a common pyrimidine ring system having a common substitution pattern. Applicants believe that searching these additional claims will not pose an additional burden on the Examiner and request joining Groups 1 and 7.

Although it is not believed that any additional fees are needed to consider this submission, the Examiner is hereby authorized to charge our deposit account no. 04-1105 should any fee be deemed necessary.

Respectfully submitted,

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John B. Alexander, Ph.D. (Reg. No. 48,399)
EDWARDS & ANGELL, LLP
P.O. Box 55874
Boston, MA 02205
Tel: (617) 439-4444
Fax: (617) 439-4170 / 7748